

**REVIEW OF THE NEOTROPICAL GENUS
TRACHELIUM HERRICH-SCHAEFFER,
WITH THE DESCRIPTION OF SIX NEW SPECIES
(HEMPTERA: ALYDIDAE: MICRELYTRINAE:
MICRELYTRINI)¹**

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ABSTRACT: Six new species of *Trachelium* Herrich-Schaeffer from Argentina, Bolivia, Brazil, Colombia, French Guiana, Panama, Trinidad, and Venezuela are described. New distributional records are given for: *T. alboapicatus* Distant, *T. bicolor* Herrich-Schaeffer, *T. fulvipes* Herrich-Schaeffer, *T. mimeticum* Breddin, *T. spectabile* Bergroth, and *T. tessellatus* Distant. A diagnosis for previously known species is provided, *T. spectabile* is redescribed, a key for the known species is given, and *T. fulvipes* is resurrected from his synonymy under *T. bicolor*.

KEY WORDS: Insecta, Hemiptera, Alydidae, Micrelytrinae, *Trachelium*, new species, Central and South America

This paper attempts to summarize our knowledge of the genus *Trachelium* Herrich-Schaeffer. *Trachelium*, a typically myrmecomorphic and exclusively Neotropical genus, is characterized by having the humeral angles of the pronotum and the apex of the scutellum strongly spinose, the head elongate before eyes, the head behind eyes tapering and narrowed, and the hind femora unarmed. Schaefer (1996) discussed the relationship with *Cydamus* Stål, the most closely related, and recently Schaefer (2004) added a key to the new world Alydidae.

Trachelium is placed in the tribe Micrelytrini based on having rostral segment II longer than maximal length of segments III and IV together, rostral segment III less than half as long as IV, and a distinct evaporative area ridge. Previously only six species were known. In this contribution, six new species collected in Argentina, Bolivia, Brazil, Colombia, French Guiana, Panama, Trinidad and Venezuela are described, and new distribution records for *T. alboapicatus*, *T. bicolor*, *T. fulvipes*, *T. mimeticum*, *T. spectabile*, and *T. tessellatus* are included. *Trachelium fulvipes* is resurrected from the synonymy under *T. bicolor*.

The following abbreviations are used for the institutions cited in this paper: AMNH (The American Museum of Natural History, New York, USA); BMNH (The Natural History Museum, London, England); BYU (Brigham Young University, Monte L. Bean Life Sciences Museum, Provo, Utah, USA); CAS (California Academy of Sciences, San Francisco, California, USA); CMNH (Carnegie Museum of Natural History, Pittsburgh, PA, USA); CUIC (Cornell University, Insect Collection, Ithaca, New York, USA); DEU (Deutsches Entomologisches Institut, Eberswalde, Germany); FMNH (Field Museum of Natural History, Chicago, Illinois, USA); HMNH (Hungarian Natural History Museum, Buda-

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pest, Hungary); INBIO (Instituto Nacional de Biodiversidad, Heredia, Costa Rica); INPA (Instituto de Pesquisas da Amazonia, Manaus, Brazil); MNHN (Museum National D'Histoire Naturelle, Paris, France); MNRJ (Museum National, Rio de Janeiro, Brazil); RNHL (Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands); UNAM (Instituto de Biología, Universidad Nacional Autónoma de México, Colección Nacional de Insectos); USNM (United States National Museum, Smithsonian Institution, Washington, D.C., USA); USUL (Utah State University, Logan, Utah, USA).

KEY TO THE SPECIES OF *TRACHELIUM*

1. Head dorsally, pronotum, and scutellum black to dark reddish brown2
- 1a. Head dorsally, pronotum, and scutellum shiny orange to chestnut orange7
2. Antennal segment IV reddish brown to chestnut orange, with basal third or basal half yellow3
- 2a. Antennal segment IV entirely reddish brown to black4
3. Scutellar spine reddish brown; metathoracic scent gland auricle bilobed, and raised; tubercle of calli exposed and acute*Trachelium ventus* NEW SPECIES
- 3a. Scutellar spine reddish brown with base yellow; metathoracic scent gland auricle elongate, flat and not bilobed; tubercle of calli short and stout*Trachelium alvarengai* NEW SPECIES
4. Femora black to dark reddish brown and with or without yellow ring near middle third; metathorax black with or without posterior margin yellow; abdominal sternite III black with or without longitudinal yellow stripe at middle third5
- 4a. Femora, metathorax, and abdominal sternite III shiny orange*Trachelium bicolor* Herrich-Schaeffer
5. Hemelytral membrane with basal half brown and the angle white, and apical half pale ambarine; scutellar spine dark reddish brown*Trachelium spectabile* Bergroth (in part)
- 5a. Hemelytral membrane pale ambarine with basal angle white; scutellar spine dark reddish brown with base yellow6
6. Foreacetabulae, metacetabulae, posterior border of propleura, and basal joint of hind femur black to dark reddish brown*Trachelium tessellatus* Distant
- 6a. Foreacetabulae, metacetabulae, posterior border of propleura, and base of hind femur yellow to shiny orange*Trachelium fulvipes* Herrich-Schaeffer
7. Hemelytral membrane with basal half brown and the angle white, and apical half ambarine; dorsal abdominal segments black8
- 7a. Hemelytral membrane pale ambarine, with basal angle white; dorsal abdominal segments orange9
8. Pronotum and scutellum black to dark reddish brown; thorax black with anterior margin of prothorax, acetabulae, and upper and posterior margin of metathorax yellow*Trachelium spectabile* Bergroth (in part)
- 8a. Pronotum, scutellum, and thorax shiny orange to chestnut orange*Trachelium mimeticum* Breddin
9. Spines of humeral angles of pronotum short, hooklike, directed backward, with apex recurved backward (Fig. 2)*Trachelium formosus* NEW SPECIES

- 9a. Spines of humeral angles of pronotum elongate, acute, needlelike, directed upward or obliquely backward (Fig. 1).....10
10. Antennal segment IV reddish brown to brownish orange11
- 10a. Antennal segment IV brownish orange with basal third or basal half yellow.....12
11. Scutellar spine shiny orange; length of antennal segment IV longer than 4.80 mm (♂) or 3.45 mm (♀); total body length longer than 11.00 mm (♂) or 9.80 mm (♀).....
.....*Trachelium secularis* NEW SPECIES
- 11a. Scutellar spine shiny orange with basal joint yellow; length of antennal segment IV shorter than 4.00 mm (♂) or 3.40 mm (♀); total body length shorter than 9.00 mm (♂), or 9.20 mm (♀)...
.....*Trachelium lepidus* NEW SPECIES
12. Metathoracic scent gland auricle creamy yellow, tuberculate, and conspicuously raised above the body surface; scutellar spine elongate, needlelike, and directed upward.....
.....*Trachelium alboapicatus* Distant
- 12a. Metathoracic scent gland auricle yellow, elongate, and flat; scutellar spine shiny, reduced to small conical expansion.....*Trachelium limitatus* NEW SPECIES

Trachelium alboapicatus Distant

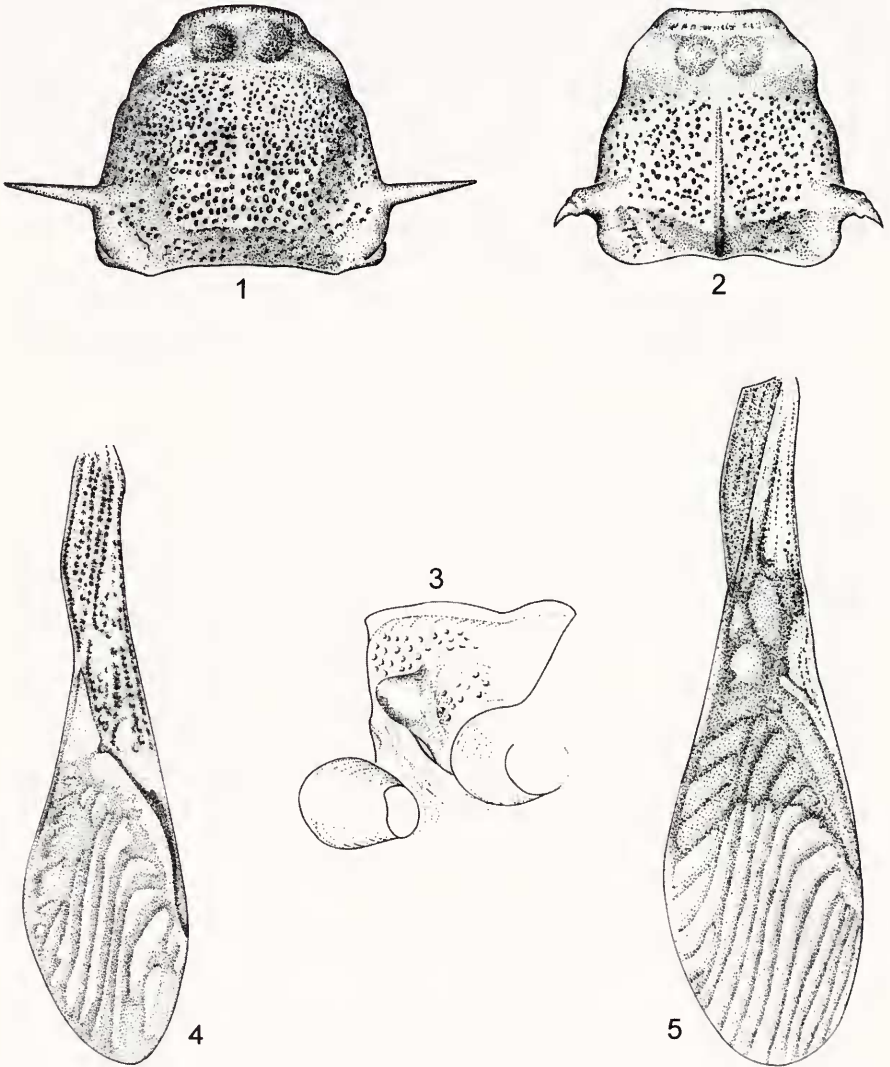
(Fig. 3)

Trachelium alboapicatus Distant, 1881: 159.

Diagnosis. This species is characterized by having the head, antennal segments I to III, legs, and dorsal abdominal segments shiny orange to chestnut orange, the metathoracic scent gland auricle creamy yellow, tuberculate, and raised above the body surface (Fig. 3), antennal segment IV with the anterior third creamy yellow and the posterior third dark brown, the humeral spines of pronotum large, elongate, needlelike, entirely shiny orange and directed obliquely backward, and the scutellar spine entirely shiny orange, and directed upward with apex curving backward; hemelytral membrane including the basal angle pale ambarine, calli raised forming a hemispheric or convex lobe, and maximal length of antennal segment IV longer than maximal length of antennal segments II and III together.

Distribution. The present species was described from Guatemala (San Gerónimo, and Tamahu) and has been subsequently reported from México (Veracruz: Atoyac, and San Luis Potosi: Tamazunchale) and Panama (Volcan de Chiriqui) (Distant 1881-1893, and Brailovsky and Zurbia 1979).

Material examined. Holotype: male, Guatemala, San Gerónimo, Champion. Deposited in BMNH. **New country records.** Costa Rica: 1 male, 3 females, 20 km S of Upala, 11-15-V-1990, 13-XII-1990, 10-I-1991, F. D. Parker. Deposited in USUL. 1 male, Alajucla, Chachahua, 24-II-1982, H. Brailovsky and E. Barrera. Deposited in UNAM. Guatemala: 1 female, Alta Vera Paz, Trece Aguas, IV-1925, Schwartz and Barber. Deposited in AMNH. México: 1 female, Veracruz, San Andres Tuxtla, Laguna Escondida, 21-IV-1989, J. L. Colin. Deposited in UNAM. 1 male, Veracruz, Peñuelas, 15-VII-1941, H. S. Dybas. Deposited in FMNH.



Figures 1-5. *Trachelium* spp. 1-2. Pronotum. 1. *T. spectabile* Bergroth. 2. *T. formosus* NEW SPECIES. 3. Metathoracic scent gland auricle of *T. alboapicatus* Distant. 4-5. Hemelytra. 4. *T. formosus* NEW SPECIES. 5. *T. spectabile* Bergroth.

Trachelium alvarengai, NEW SPECIES

Description. Male (holotype). **Dorsal coloration.** Head, pronotum including humeral spines, scutellum (base of scutellar spine yellow), and clavus shiny black to shiny reddish brown; antennal segments I to III chestnut orange, IV chestnut orange with basal third yellow; corium yellow with apical margin creamy white, and punctures, middle third of exocorium and endocorium, and apical angle black to dark reddish brown; hemelytral membrane dark ambarine with basal angle grayish to white; connexival segments III-IV yellow, V-VI brown with posterior margin yellow, and VII brown with posterior border yellow; dorsal abdominal segments orange. **Ventral coloration.** Head shiny pale reddish brown; rostral segments I to III shiny pale chestnut orange, IV dark chestnut orange with apex black; propleura shiny black with acetabulae and prosternum yellow to shiny orange; mesopleura shiny black with acetabulae, posterior margin, and mesosternum yellow to shiny orange; metathorax including metathoracic scent gland auricle shiny chestnut orange; legs shiny chestnut orange; abdominal sternite III chestnut orange, IV shiny pale reddish brown with wide yellow longitudinal stripe running at middle third, and V to VII shiny pale reddish brown with posterior margin of V yellow; pleural abdominal margins III-IV and VII yellow, and V-VI shiny pale reddish brown with posterior margin yellow. **Structure:** Maximal length of antennal segment IV longer than maximal length of antennal segments II and III together; rostrum reaching middle third of metasternum; each callus raised into short, stout, conical acute tubercle; spines of humeral angles large, needlelike, recurved backward; scutellar spine long, erect, needlelike, directed backward; metathoracic scent gland auricle elongate, flat, not bifurcate, curved anteriorly.

Male variation. 1. Rostral segment I dark brown with apical joint chestnut orange. 2. Hind femur shiny chestnut orange with pale yellow ring at middle third. 3. Thorax shiny black with acetabulae yellow. 4. Abdominal sternite shiny black to shiny reddish brown with longitudinal stripe at middle third of sternite III and posterior margin of V yellow.

Female. Dorsal coloration. Head, pronotum including humeral spines, scutellum (base of scutellar spine yellow), and clavus shiny black; antennal segments I to III shiny reddish brown, and IV dark reddish brown with basal third yellow; corium shiny black with two short yellow to creamy yellow transversal fascia, one anterior and near to middle third, the other posterior and close to apical angle; hemelytral membrane including basal angle dark ambarine; connexivum shiny black with posterior margin or posterior border yellow; dorsal abdominal segments black. **Ventral coloration.** Shiny black with following areas yellow: acetabulae, posterior margin of mesopleura and metapleura, longitudinal stripe and middle third of abdominal sternite IV, posterior margin of abdominal sternite V, and posterior margin of pleural abdominal margins IV and V; rostral segment I shiny black with apical joint chestnut orange, and II to IV shiny chestnut orange with apex of IV black; metathoracic scent gland auricle dark yellow; fore and middle legs with coxae, trochanters and femora shiny black to shiny reddish brown, tibiae dark yellow with apical third chestnut orange, and tarsi chestnut orange; hind leg with coxa and trochanter shiny black to shiny reddish brown, femur shiny black with basal joint yellow, and tibiae and tarsi like fore and middle legs.

Female variation. 1. Basal angle of hemelytral membrane grayish. 2. Hind femur with yellow ring near middle third.

Measurements. Male given first, followed in parenthesis by those of female. Head length: 2.14 mm (2.44 mm); width across eyes: 1.68 mm (1.78 mm); interocular space: 0.74 mm (0.88 mm); interocellar space: 0.22 mm (0.30 mm); preocular distance: 1.22 mm (1.44 mm); antennal segments lengths: I, 1.48 mm (1.44 mm); II, 1.76 mm (1.64 mm); III, 1.52 mm (1.40 mm); IV, 4.24 mm (3.52 mm). Pronotal length: 1.48 mm (1.44 mm); maximum width of anterior lobe: 1.20 mm (1.44 mm); maximum width of posterior lobe (without humeral spines): 1.64 mm (1.64 mm). Scutellar length: 0.92 mm (1.04 mm); width: 0.56 mm (0.62 mm). Total body length: 9.23 mm (9.77 mm).

Type material. Holotype: male, Brazil, Amazonas, Manaus, 22-IV-1954, Elias and Roppa. Deposited in MNRJ. **Paratypes:** 1 female, Brazil, Para, Jacareacanga, XII-1968, M. Alvarenga. Deposited in AMNH. 1 male, Brazil, Amazonas, Manaus, Ponte de Bolivia, 29-XI-1969, Evangelistas. Deposited in UNAM. 3 females, Brazil, Rondonia, 62 km SW Ariquemes, Fzda Rancho Grande, 30-III-10-IV-1992, J. E. Eger. Deposited in USNM (Drake Collection).

Discussion. Of the known species of *Trachelium* with the head, pronotum, scutellum, and clavus shiny black to shiny reddish brown only *T. alvarengai* has antennal segment IV bicolored. In *T. bicolor* Herrich-Schaeffer, *T. fulvipes* Herrich-Schaeffer, and *T. tessellatus* Distant, antennal segment IV is entirely black to reddish brown.

Trachelium alboapicatus Distant has antennal segment IV bicolored, both the head, pronotum, scutellum, and clavus are shiny orange to shiny chestnut orange, and the metathoracic scent gland auricle is conspicuously tuberculiform (Fig. 3). This new species exhibits a clearly dimorphic color, which is explained in the description of each sex.

Etymology. Named after Moacir Alvarenga, who collected one of the paratypes of this species.

Trachelium bicolor Herrich-Schaeffer

Trachelium bicolor Herrich-Schaeffer, 1853: 274-275.

The type species of the genus *Trachelium* is distinguished by having the head, pronotum, and scutellum (base of scutellar spine yellow) black, antennal segment IV black to dark reddish brown, dorsal abdominal segments dark yellow with segment VII black, and following areas shiny orange to shiny chestnut orange: femora, metathorax, and abdominal sternite III.

Distribution. This attractive species was originally described from Brazil (Rio de Janeiro, and Santa Catarina: Nova Teutonia) and subsequently reported from Argentina (Misiones: Pindapoy, Iguazu, Presidente Perón, and Ciervo Petizo) and Bolivia (Yungas and Coroico) (Herrich-Schaeffer 1853, Stål 1870, and Kormilev 1953).

Material examined. New country records. Brazil: 4 males, 2 females, Minas Gerais, Pedra Azul, XI-1970, I-1971, F. M. Oliveira. Deposited in AMNH and UNAM. 4 males, Minas Gerais, Carmo do Rio Claro, VI-1943, Carvalho and I-1978 Carvalho and Schaffner. Deposited in MNRJ. 12 males, Chapada, I-XII (without data), S. M. Klages. Deposited in CMNH 1 male, Para, Benevides, X-1918, S. M. Klages. Deposited in CMNH. 1 female, Mato Grosso, Itaum, Dourados, III-1974, M. Alvarenga. Deposited in AMNH. 1 male, Goyaz, Campinas, XII-1935, Aorgmeier, Lopes and Carvalho. Deposited in MNRJ. 1 male, Para, Belem, Mocambo, 31-I-1980, M. F. Torres. Deposited in INPA. Ecuador: 2 males, Coca on Rio Napo, Napo-Pastaza Prov., V-1965. Deposited in AMNH. 1 male, Napo-Pastaza, Shushufindi SE of Aguarico, 150-200 m, 2-X-1977, L. E. Peña. Deposited in AMNH. Paraguay: 1 female, Villarica, X (without data), F. Schade. Deposited in AMNH. Peru: 1 male, Departamento Junin, Estancia Naranjal, San Ramón, 1000 m, 20-27-VII-1965, P. and B. Wygodzinsky. Deposited in AMNH. 1 male, Departamento Junin, San Ramón de Pangoa, 2-III-1972, R. T. and J. C. Schuh. Deposited in UNAM. 1 male, Vilcanota (without data). Deposited in HMNH. Trinidad: 1 male, Arima, Blanchisseuse Rd., 16 km N Arima, 650 m, 30-III-1987, M. E. Carter, E. R. Hoebeke and J. K. Liebherr. Deposited in CUIC. 1 male, Cumoto (without data), W. S. Brooks. Deposited in AMNH. Suriname: 2 males, Sipaliwini, 12-VI-1963, P. H. van Doesburg. Deposited in RNHL. Venezuela: 1 male, Bolivar, km 143 El Dorado-Santa Elena, 1200 m, 18-X-1972, J. and B. Bechyne. Deposited in UNAM.

Trachelium formosus, NEW SPECIES

(Figs. 2, 4, 6)

Description. Male (holotype). Dorsal coloration. Head, pronotum, scutellum, and clavus shiny chestnut orange; antennal segments I to III orange, IV dark brown with basal joint dark yellow; humeral spines black, scutellar spine creamy yellow with apex black; corium dull chestnut orange with veins paler; hemelytral membrane light ambarine with basal angle white (Fig. 4); connexival segments III to V and VII reddish brown with posterior margin creamy yellow, and VI reddish brown with anterior border and posterior margin creamy yellow; dorsal abdominal segments pale orange. **Ventral coloration.** Shiny chestnut orange with apex of rostral segment IV black, and following areas yellow to creamy yellow: collar, anterior border of prothorax, lower margin of acetabulae, posterior border of mesopleura and metapleura, middle third of abdominal sterna III and IV, posterior margin of abdominal sternite V, posterior border of pleural sterna III to V and VII, and anterior border and posterior margin of VI; metathoracic scent gland auricle dull chestnut orange. **Structure:** Maximal length of antennal segment IV shorter than maximal length of antennal segments II and III

together; rostrum reaching posterior margin of metasternum; each callus raised forming a conical acute tubercle; spines of humeral angles of pronotum hooklike, stout, directed upward, with apex curved backward (Fig. 2); metathoracic scent gland auricle elongate, slender, short, flat, not projecting beyond upper third of metacubulae; scutellar spine straight, directed upward (Fig. 2).

Female. Coloration. Similar to male (holotype). **Dorsal coloration:** Connexival segments VIII and IX reddish brown with posterior third of IX dull yellow; dorsal abdominal segments VIII and IX, and posterior margin of VII reddish brown. **Ventral coloration:** Head, rostral segments (apex of IV black), mesothorax, and metathorax shiny chestnut orange with acetabulae, and posterior margin of mesopleura, and metapleura yellow; prothorax shiny pale orange with collar, acetabulae, and anterior border yellow; abdominal sterna shiny reddish brown, with middle third of abdominal sternite IV, and posterior margin of V creamy yellow; metathoracic scent gland auricle dull chestnut orange.

Variation. 1. Humeral spines shiny reddish brown with basal third chestnut orange. 2. Corium shiny chestnut orange. 3. Connexival segment VI reddish brown or chestnut orange. 4. Acetabulae entirely yellow. 5. Abdominal sterna III and IV entirely shiny chestnut orange.

Measurements. Male given first, followed in parenthesis by those of female. Head length: 2.28 mm (2.36 mm); width across eyes: 1.92 mm (1.88 mm); interocular space: 1.04 mm (1.08 mm); interocellar space: 0.42 mm (0.40 mm); preocular distance: 1.38 mm (1.40 mm); antennal segments lengths: I, 1.16 mm (1.08 mm); II, 1.72 mm (1.44 mm); III, 1.72 mm (1.48 mm); IV, 3.20 mm (2.88 mm). Pronotal length: 1.76 mm (1.52 mm); maximum width of anterior lobe: 1.48 mm (1.40 mm); maximum width of posterior lobe (without humeral spines): 1.88 mm (1.76 mm). Scutellar length: 1.12 mm (1.08 mm); width: 0.76 mm (0.72 mm). Total body length: 10.48 mm (9.80 mm).

Type material. **Holotype:** male, Brazil, Mato Grosso, Itaum, Dourados, III-1974, M. Alvarenga. Deposited in AMNH. **Paratypes:** 2 males, Brazil, Goyaz, Campinas, XII-1935, Borgmeier and Lopes. Deposited in MNRJ. 1 female, Brazil, Sao Paulo (without data). Deposited in HMNH. 3 males, 2 females, Brazil, Chapada, IV-VII (without data). Deposited in CMNH, and UNAM. 1 male, Bolivia, Santa Cruz de la Sierra, 450 m, XI-1910, J. Steinbach. Deposited in CMNH.

Discussion. *Trachelium alboapicatus* Distant and *T. mimeticum* Breddin are the only previous known species with the head, antennal segments I to III, and legs shiny chestnut orange to shiny orange. *Trachelium formosus* belongs to this group and is characterized by having the spines of humeral angles hooklike, stout, black to reddish brown, directed upward and curving backward (Fig. 2), antennal segment IV dark brown with basal third dark yellow or dark orange, the scutellar spine creamy yellow with apex black, and the corium without creamy yellow marks.

In *T. alboapicatus* and *T. mimeticum*, the humeral spines are needlelike, and shiny chestnut orange (Fig. 1), the scutellar spine shiny chestnut orange, and the apical margin of corium or the apical angle of corium creamy yellow to creamy white.

The abdominal segments of *T. mimeticum* are dark brown to black, and in *T. alboapicatus* and *T. formosus* orange. In *T. alboapicatus*, antennal segment IV has the anterior half of the segment creamy yellow and the posterior half dark brown, with metathoracic scent gland auricle creamy yellow, tuberculate, clearly exposed, and raised above the body surface. In *T. formosus*, the metathoracic scent gland auricle is dull orange and flat, and antennal segment IV dark brown with basal third dark yellow or dark orange (Fig. 6).

Etymology. From the Latin, *formosus*, meaning beautifully formed.

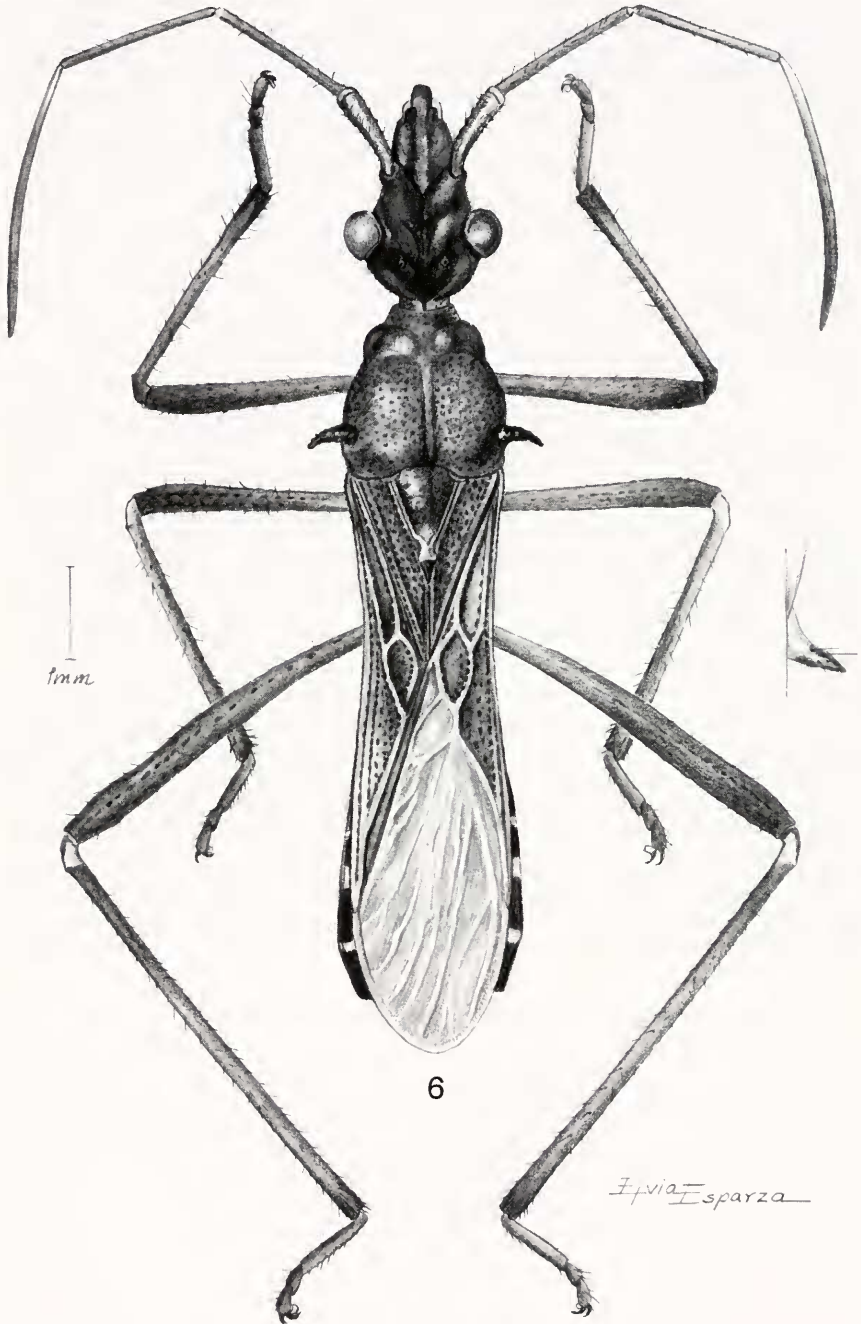


Figure 6. Dorsal view of *Trachelium formosus* NEW SPECIES.

Trachelium fulvipes Herrich-Schaeffer

Trachelium fulvipes Herrich-Schaeffer, 1853: 275.

Kormilev (1953) synonymized this species with *T. bicolor* Herrich-Schaeffer. On this contribution *Trachelium fulvipes* Herrich-Schaeffer is resurrected. They can be distinguished from one another by the color of the femora, which is black in *T. fulvipes*, and shiny orange in *T. bicolor*.

Distribution. This species was described and previously known only from Brazil (Rio de Janeiro).

Material examined. New country records. Brazil: 1 female, Goiás, Jataí, XI-1972. Deposited in the AMNH. 1 female, Amazonas, Tabatine, V-1950, J. C. M. Carvalho. Deposited in MNRJ. 1 female, Minas Gerais, Carmo do Rio Claro, VIII-1975, J. C. M. Carvalho. Deposited in MNRJ. 1 macho, Mato Grosso, Itaum, Dourados, III-1974, M. Alvarenga. Deposited in the AMNH. Paraguay: 1 female, Gran Chaco, 260 km W Paraguay River, 10-VI-1936, A. Schulze. Deposited in the AMNH. Peru: 1 female, Puerto Bermudes, Rio Pihhis, 12-VII-1920. Deposited in UNAM.

Trachelium lepidus, NEW SPECIES

Description. Male (holotype). Dorsal coloration. Head, antennal segments I to III, pronotum, scutellum, and clavus shiny orange; antennal segment IV reddish brown; scutellar spine yellow with apical third orange; corium dull orange with anterior third of exocorium, veins, apical margin, and quadrate spot near apical angle white; hemelytral membrane dark ambarine, with basal angle white; connexivum dark orange with posterior margin yellow; dorsal abdominal segments orange. **Ventral coloration.** Shiny orange, with apex of rostral segment IV black, and following areas yellow: posterior margin of mesopleura and metapleura, mesoacetabulae, middle third of abdominal sternite IV, posterior margin of V, and posterior margin of pleural sterna III to VII; metathoracic scent gland auricle dull orange. **Structure:** Maximal length of antennal segment IV longer than maximal length of antennal segments II and III together; rostrum reaching posterior margin of metasternum; each callus raised into conical acute tubercle; spines of humeral angles and scutellar spine, large, needlelike, and directed upward; metathoracic scent gland auricle elongate, slender, flat, curving anteriorly.

Female. Coloration. Similar to male (holotype). Connexival segments VIII and IX, dorsal abdominal segments VIII and IX, and genital plates shiny orange.

Measurements. Male given first, followed in parenthesis by those of female. Head length: 2.08 mm (2.32 mm); width across eyes: 1.58 mm (1.68 mm); interocular space: 0.82 mm (0.86 mm); interocellar space: 0.26 mm (0.24 mm); preocular distance: 1.08 mm (1.34 mm); antennal segments lengths: I, 1.40 mm (1.36 mm); II, 1.60 mm (1.56 mm); III, 1.32 mm (1.28 mm); IV, 3.92 mm (3.36 mm). Pronotal length: 1.44 mm (1.52 mm); maximum width of anterior lobe: 1.08 mm (1.18 mm); maximum width of posterior lobe (without humeral spines): 1.44 mm (1.48 mm). Scutellar length: 0.80 mm (0.92 mm); width: 0.44 mm (0.52 mm). Total body length: 8.60 mm (9.00 mm).

Type material. Holotype: male, Panama, Canal Zone, Ft. Davis, 5-VII-1924, N. Banks. Deposited in AMNH. Paratypes: 2 females, Panama, Canal Zone, Ft. Davis, 5-9-VII-1924, N. Banks. Deposited in AMNH, and UNAM. 6 males, 5 females, Panama, Canal Zone, Margarita, 25-28-X-1972, L. H. Rolston. Deposited in the USNM, and UNAM. 1 male, Panama, Cerro Campana, 12-I-1974, J. A. Slater, and J. Harrington. Deposited in AMNH. 1 male, Panama, Canal Zone, Madden Forest Res., 9-I-1974, J. A. Slater, and J. Harrington. Deposited in AMNH. 2 males, Panama, Gamboa, 11-VIII-1986, C. Riley Nelson (Malaise Trap). Deposited in BYU. 1 female, Panama, Canal Zone, Barro Colorado Isl., 24-VII-1963, D. Q. Cavagnaro and M. E. Irwin. Deposited in CAS. 1 male, Panama, Canal Zone, Barro Colorado, 3-I-1929, C. H. Curran. Deposited in UNAM. 1 female, Colombia, Valle, Delfina, 400-500 m, 26-VIII-1967, P. y B. Wygodzinsky. Deposited in AMNH.

Discussion. *Trachelium lepidus*, like *T. alboapicatus* Distant, shares the following characters: head, antennal segments I to III, legs, and pronotum shiny

orange. In *T. alboapicatus* the metathoracic scent gland auricle is creamy yellow, clearly tuberculate, and raised above the body surface (Fig. 3), the humeral spines of pronotum are large, needlelike, and directed obliquely upward, the scutellar spine is entirely orange, the basal angle of the hemelytral membrane pale ambarine, and abdominal sternite V yellow, with anterior border shiny orange with brown marks. In *T. lepidus*, the metathoracic scent gland auricle is orange, flat, curving anteriorly, and never raised, the humeral spines are large, elongate, needlelike, and clearly directed upward, the scutellar spine yellow with apical third orange, the basal angle of the hemelytral membrane white, and abdominal sternite V shiny orange with only the posterior margin yellow.

Etymology. From the Latin, *lepidus*, meaning pleasant, elegant.

Trachelium limitatus, NEW SPECIES

Description. Male (holotype). Dorsal coloration. Head, antennal segments I to III, pronotum, clavus, connexivum, and dorsal abdominal segments shiny to dull orange; antennal segment IV brownish orange with basal third yellow; humeral spines reddish brown; corium dull orange with posterior third of costal margin and small dot at middle third of endocorium yellow; hemelytral membrane pale ambarine. **Ventral coloration.** Head, rostral segments (apex of IV black), and thorax orange with yellow reflections; metathoracic scent gland auricle yellow; legs and abdominal sterna orange. **Structure:** Maximal length of antennal segment IV longer than maximal length of antennal segments II and III together; rostrum reaching middle third of metasternum; each callus raised into conical acute tubercle; humeral spines large, needlelike, and directed obliquely backward; metathoracic scent gland auricle elongate, slender, flat, not projecting beyond upper third of metacetaulae; scutellar spine tiny, reduced to small conical expansion.

Female. Unknown.

Measurements. Male. Head length: 2.48 mm; width across eyes: 1.78 mm; interocular space: 0.96 mm; interocellar space: 0.34 mm; preocular distance: 1.50 mm; antennal segments lengths: I, 2.00 mm; II, 2.16 mm; III, 1.84 mm; IV, 4.20 mm. Pronotal length: 1.64 mm; maximum width of anterior lobe: 1.42 mm; maximum width of posterior lobe (without humeral spines): 1.94 mm. Scutellar length: 1.20 mm; width: 0.76 mm. Total body length: 11.63 mm.

Type material. Holotype: male, Argentina, Misiones, Bernardo de Irigoyen, 12-XI-1973, Escobar y Claps. Deposited in UNAM. **Paratype.** 1 male, Argentina, Misiones, Posadas, 1972, D. Carpintero. Deposited in UNAM.

Discussion. This species can be distinguished by the following combination of characters: dorsum of abdominal segments orange, scutellar spine tiny, reduced to small expansion, basal angle of hemelytral membrane pale ambarine, and metathoracic scent gland auricle elongate, and flat. In *T. mimeticum* Breddin the most similar species, the dorsal abdominal segments are black, the scutellar spine elongate, needlelike and directed upward, the basal angle of the hemelytral membrane white, and the metathoracic scent gland auricle is raised into a small rounded tubercle.

Etymology. Named for its limited known distribution.

Trachelium mimeticum Breddin

Trachelium mimeticum Breddin, 1904: 147.

This species is characterized by having the head, antennal segments I to III, and legs orange to chestnut orange; the metathoracic scent gland auricle dark yellow, tuberculate and raised above body surface; the humeral spine of pronotum reddish brown, large, needlelike and directed obliquely backward; the scutellar spine shiny orange and directed upward with the apex curving backward; the and dorsal abdominal segments black; hemelytral membrane pale ambarine, with pale blue reflections and with basal angle whitish, and each callus with an acute conical tubercle.

Distribution. This species was originally described from Bolivia and apparently has not been recorded since that time.

Material examined. Syntypes: 2 males, Bolivia, Yungas de la Paz. Deposited in DEU.

Trachelium secularis, NEW SPECIES

Description. Male (holotype). Dorsal coloration. Head, antennal segments I to III, pronotum, scutellum, and clavus shiny orange; antennal segment IV reddish brown; humeral spines of pronotum and scutellar spine reddish brown; corium pale orange brown, with following areas white: transversal fascia near middle third, small dot behind the fascia and close to apical margin, middle third of apical margin, and quadrate spot near apical angle; hemelytral membrane pale ambarine; connexival segments III and IV dark orange with upper margin yellow, V to VII dark orange; dorsal abdominal segments orange. **Ventral coloration.** Shiny orange with apex of rostral segment IV black, and mesoacetabulae, metacetabulae, posterior margin of metapleura, and posterior margin of abdominal sterna IV and V creamy yellow to yellow. **Structure:** Maximal length of antennal segment IV longer than maximal length of antennal segments II and III together; rostrum reaching posterior margin of metasternum; each callus raised into an acute conical tubercle; spines of humeral angles large, needlelike, directed obliquely backward; metathoracic scent gland auricle short, flat, straight, not projected beyond the upper third of metacetabulae; scutellar spine straight, needlelike, directed upward.

Female. Coloration. Similar to male (holotype). Connexival segment III and IV yellow to pale orange, V and VI yellow with anterior third dark chestnut orange, and VII to IX dark chestnut orange; abdominal segments VIII and IX dark chestnut orange; abdominal sterna yellow to pale orange with anterior margin of sternite IV and V, and genital plates chestnut orange.

Measurements. Male given first, followed in parenthesis by those of female. Head length: 2.72 mm (2.34 mm); width across eyes: 1.92 mm (1.72 mm); interocular space: 0.92 mm (0.88 mm); interocellar space: 0.40 mm (0.28 mm); preocular distance: 1.56 mm (1.22 mm); antennal segments lengths: I, 1.92 mm (1.48 mm); II, 1.68 mm (1.56 mm); III, 1.50 mm (1.52 mm); IV, 5.07 mm (3.56 mm). Pronotal length: 1.84 mm (1.60 mm); maximum width of anterior lobe: 1.36 mm (1.24 mm); maximum width of posterior lobe (without humeral spines): 1.88 mm (1.72 mm). Scutellar length: 1.04 mm (0.96 mm); width: 0.72 mm (0.60 mm). Total body length: 11.27 mm (10.05 mm).

Type material. Holotype: male, Trinidad, W. I., Arima Valley, 800'-1200', 10-22-IV-1964, Rozen and Wygodzinsky. Deposited in AMNH. Paratypes: 2 females, Panama, Canal Zone, Corozal, 22-I-1929, C. H. Curran. Deposited in AMNH, and UNAM. 1 male, Panama, Cocle, El Valle, 500-600 m, VII-1981, N. L. H. Krauss. Deposited in UNAM.

Discussion. This species resembles *T. alboapicatus*. Distant in having the head, antennal segments I to III, scutellum including the spine, and legs shiny orange; the humeral spines of pronotum large, needlelike, and directed oblique-

ly upward; the basal angle of the hemelytral membrane pale ambarine; and the total length of antennal segment IV longer than length of antennal segments II and III together.

Trachelium secularis can be distinguished by having the humeral spines and antennal segment IV entirely reddish brown, and the metathoracic scent gland auricle orange, flat, straight, not curving anteriorly or posteriorly, and not raised above the body surface. In *T. alboapicatus*, the humeral spines are shiny orange, antennal segment IV is reddish brown with anterior third yellow, and metathoracic scent gland auricle creamy yellow and remarkably raised above the body surface.

Trachelium limitatus has the scutellar spine yellow with the apical third orange, the basal angle of the hemelytral membrane white, and the metathoracic scent gland auricle curving anteriorly.

Etymology. The specific epithet means "wordly," referring to the comparatively broad distribution of this species.

Trachelium spectabile Bergroth

(Figs. 1, 5, 7)

Trachelium spectabile Bergroth (in Poppius and Bergroth), 1920-1921: 68-69.

Redescription. Male. Dorsal coloration. Head shiny orange with interocular space mostly black; antennal segments I to III shiny chestnut orange, IV dark brownish orange; pronotum, scutellum, and clavus black; humeral spines and scutellar spine dark reddish brown; corium with basal third and apical angle dark yellow with punctures chestnut orange, middle third reddish brown with upper and lower area whitish and punctures chestnut orange; hemelytral membrane with basal half brown with angle white, and apical half pale ambarine, with veins darker (Fig. 5); connexival segments III and IV dark reddish brown with upper margin yellow, V to VII dark reddish brown with upper border yellow; dorsal abdominal segments black. **Ventral coloration.** Head shiny orange; rostral segments shiny chestnut orange with apex of IV black; thorax black with anterior margin of prothorax, acetabulae, and upper and posterior margin of metathorax yellow; legs dark reddish brown; metathoracic scent gland auricle dark orange brown; abdominal sterna dark reddish brown with posterior margin of abdominal sterna III to V, and middle third of VII yellow; pleural margin III, IV, and VII yellow, V dark reddish brown with two yellow spots at posterior third, VI reddish brown with one yellow spot near middle third. **Structure:** Maximal length of antennal segment IV clearly longer than maximal length of antennal segments II and III together; rostrum reaching posterior margin of metasternum; each callus raised into an acute conical tubercle; spines of humeral angles large, needlelike, directed obliquely backward (Fig. 1); scutellar spine large, needlelike, directed upward; metathoracic scent gland auricle short, broadening at distal end, not extending beyond the upper third of metacetabulae.

Female. Coloration. Similar to male. Connexival segments III to V yellow, VI and VII pale brown with upper border yellow, VIII and IX dark reddish brown; abdominal segments VIII and IX dark reddish brown; pleural margins III to VII yellow; genital plates dark reddish brown.

Variation. This species is quite variable in regards to head color. In some individuals the head is entirely black or shiny orange, or shiny orange with the interocular space black, and antennal segment IV dark brownish except in one specimen which is bicolored (black with basal third dark orange).

Measurements. Male given first, followed in parenthesis by those of female. Head length: 2.84 mm (2.96 mm); width across eyes: 2.10 mm (2.16 mm); interocular space: 1.10 mm (1.24 mm); interocellar space: 0.40 mm (0.38 mm); preocular distance: 1.52 mm (1.50 mm); antennal segments lengths: I, 2.20 mm (2.20 mm); II, 1.84 mm (2.12 mm); III, 1.76 mm (mutilated); IV, 6.20 mm (mutilated). Pronotal length: 1.88 mm (2.12 mm); maximum width of anterior lobe: 1.86 mm (1.90 mm); maximum width of posterior lobe (without humeral spines): 2.18 mm (2.20 mm). Scutellar length: 1.20 mm (1.28 mm); width: 0.82 mm (0.84 mm). Total body length: 12.15 mm (13.18 mm).

Distribution. This species was described from Peru, without any other reference.

Material examined. New country records.- 1 female, Bolivia, Nor Yungas, Caranavi, 9-VI-1931, P. Denier. Deposited in UNAM. 2 males, Brazil, Chapada, III-IV (without data). Deposited in CMNH and UNAM. 1 male, Peru, Marcapata (without data). Deposited in HMNH. 1 male, Peru, Pachitea (without data). Deposited in HMNH.

Discussion. Similar to *T. mimeticum* Breddin, with the dorsal abdominal segments black, head in ventral view shiny orange, and hemelytral membrane clearly bicolored, with basal half brown with angle white, and apical half pale ambarine.

In *T. mimeticum*, the head in dorsal view, the pronotum, scutellum, clavus, corium, legs, and ventral surface are almost entirely shiny orange and in *T. spectabile* Bergroth are almost black.

Trachelium tessellatus Distant

Trachelium tessellatus Distant, 1892: 373-374.

This species seems to be most closely related to the Brazilian *T. bicolor* Herrich-Schaeffer and *T. fulvipes* Herrich-Schaeffer, with which it agrees in the black color of head, pronotum and scutellum (base of scutellar spine yellow), plus the antennal segment IV black to dark reddish brown.

In *T. bicolor* the femora are shiny orange to shiny chestnut orange, whereas in the other two species the femora are black with or without a yellow median ring. In *T. tessellatus* Distant the basal joint of femora is black to dark reddish brown, the body size longer, and the distribution is from southern México to Colombia. *Trachelium fulvipes* is a shorter species, with the basal joint of femora yellow, and it occurs throughout Brazil, Paraguay, and Peru.

Distribution. This species was originally described from Panama (David, Bugaba, and Volcan de Chiriqui) and has been reported only from there.

Material examined. Syntype: male, Panama, Bugaba, Champion. Deposited in BMNH. New country records. Colombia: 1 male, 1 female, Minca, V-VI-1919 (without data). Deposited in CMNH. Costa Rica: 1 male, Provincia Puntarenas, Estación Bijagual, 500 m, V-1994, J. Saborio. Deposited in INBIO. 1 male, 2 females, Provincia Puntarenas, Estación Carara, Res. Biol. Carara, 200 m, I-II-1990, R. Zuñiga. Deposited in INBIO and UNAM. 2 females, Provincia Puntarenas, Estación Quebrada Bonita, Res. Biol. Carara, 50 m, XII-1992, R. Guzman. Deposited in INBIO. Panama: 1 male, 1 female, Canal Zone, Madden Forest Res., 7-I-1974, J. A. Slater and J. Harrington. Deposited in UNAM. 1 female, Cocle Prov., El Valle (La Mesa), 13-I-1974, J. A. Slater and J. Harrington. Deposited in UNAM.

Trachelium ventus, NEW SPECIES

Description. Female (holotype). Dorsal coloration. Head, pronotum including humeral spines, scutellum including scutellar spine, and clavus shiny dark reddish brown; antennal segments I to III shiny reddish brown, IV reddish brown with basal third yellow; corium dark brown with some central pale yellow white tessellate markings, apical margin white, and apical angle dark brown; hemelytral membrane pale ambarine with bluish green reflections, veins darker; connexival segments III, and V to VII reddish brown with posterior border yellow, IV yellow with basal border brown; dorsal abdominal segments reddish brown. **Ventral coloration.** Shiny reddish brown to black with collar, acetabulae, posterior margin of metapleura, metathoracic scent gland auricle, middle third of abdominal sternite III, and posterior margin of abdominal sternite V yellow; rostral segment I dark reddish brown with apical joint chestnut orange, and II to IV chestnut orange with apex of IV black; coxae, trochanter and femora reddish brown, and tibiae and tarsi dark chestnut orange; abdominal pleural margin III reddish brown with two spots, and posterior border yellow, IV yellow with anterior bor-

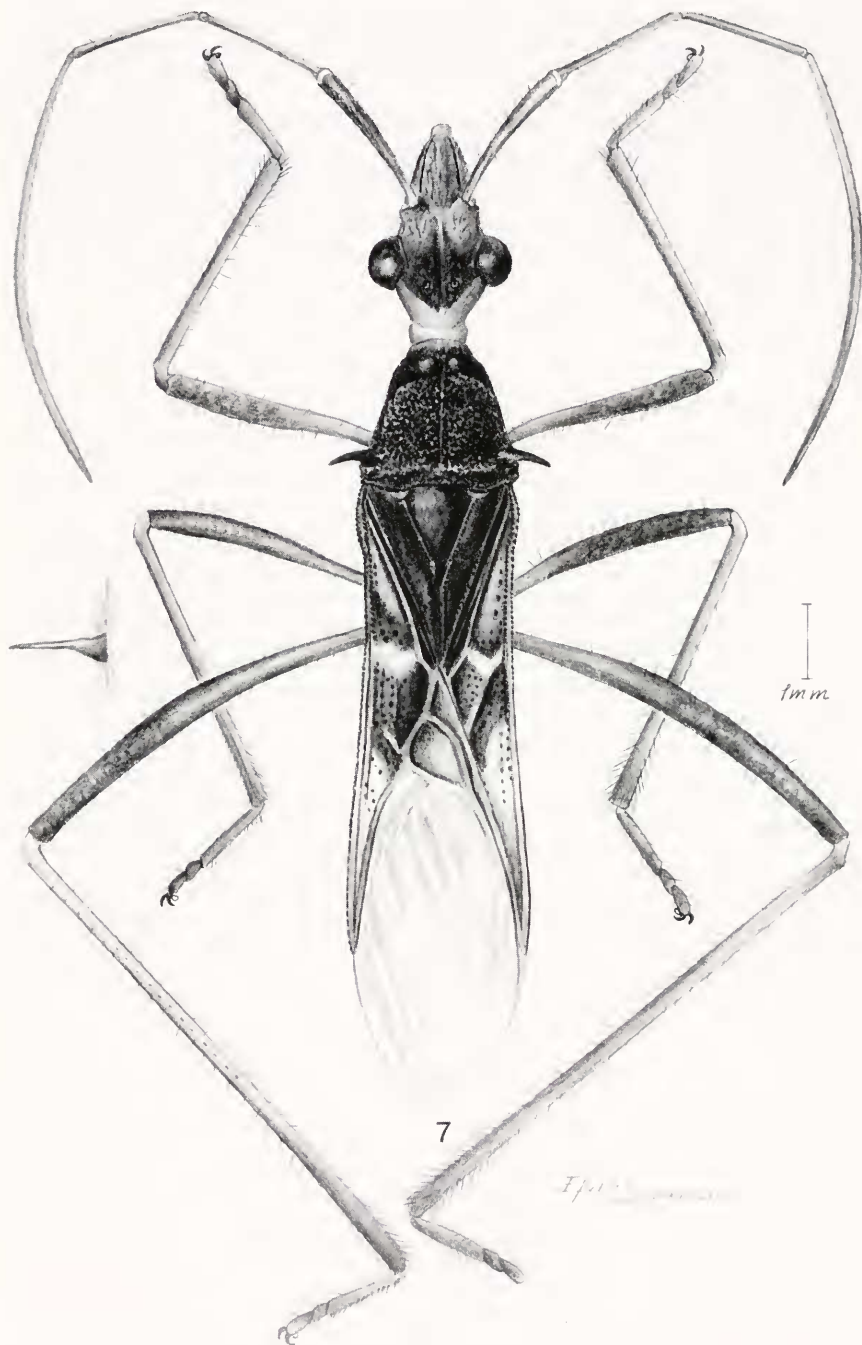


Figure 7. Dorsal view of *Trachelium spectabile* Bergroth.

der brown, V reddish brown with posterior margin yellow, VI and VII reddish brown with two yellow spots, and VIII and IX reddish brown. **Structure:** Maximal length of antennal segment IV longer than maximal length of antennal segments II and III together; rostrum reaching posterior margin of metasternum; each callus remarkably raised into a large acute needlelike spine; spines at humeral angles large, needlelike and recurved backward; scutellar spine long, erect, and needlelike; metathoracic scent gland auricle bilobate, and laterally raised above body surface.

Male. Unknown.

Measurements. Female. Head length: 2.40 mm; width across eyes: 1.92 mm; interocular space: 0.82 mm; interocellar space: 0.26 mm; preocular distance: 1.56 mm; antennal segments lengths: I, 2.12 mm; II, 2.20 mm; III, 1.80 mm; IV, 4.52 mm. Pronotal length: 1.88 mm; maximum width of anterior lobe: 1.38 mm; maximum width of posterior lobe (without humeral spines): 1.96 mm. Scutellar length: 0.82 mm; width: 0.68 mm. Total body length: 11.85 mm.

Type material. **Holotype:** female, French Guiana, Mana River, VI-1917. Deposited in CMNH. **Paratypes:** 1 female, French Guiana, V-1917. Deposited in UNAM. 1 female, French Guiana, Saul, 18-VIII-1881. Deposited in MNHN.

Discussion. This species is similar to *T. alvarengai* in having antennal segment IV bicolored and longer than the maximum length of antennal segments II and III combined, and the head, pronotum, and scutellum black to reddish brown.

In *T. ventus*, the scutellar spine is entirely reddish brown, the metathoracic scent gland auricle bilobate and raised above the body surface, the tubercle of each calli remarkably exposed and acute, and the hind femur entirely reddish brown. *Trachelium alvarengai* has the scutellar spine black to reddish brown with basal joint yellow, the metathoracic scent gland auricle elongate, flat, not bilobate or bifurcate, the tubercle of each calli stout and short, and basal joint of hind femur yellow.

Etymology. From the Latin, *ventus*, meaning wind.

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LITERATURE CITED

- Brailovsky, H. and R. Zurbia Flores.** 1979. Contribución al estudio de los Hemiptera-Heteróptera de México: XVII. Revisión de la Familia Alydidae Amyot y Serville. Anales del Instituto de Biología, Universidad Nacional Autónoma de México, Serie Zoología 50 (1):255-339.
- Breddin, G.** 1904. Neue Rhynchotenausbeute aus Sudamerika. Societas Entomologica 18:147.
- Distant, W. L.** 1881-1893. Biología Centrali-Americana. Heteroptera I. London, England, United Kingdom. 159, 373-374.
- Herrich-Schaeffer, G. A. W.** 1853. Die Wanzenartigen Insecten. 9:274-275, 989-990.
- Kormilev, N. A.** 1953. Revisión de Micrelytrinae Stål de la Argentina, con descripción de un género y siete especies nuevas de Argentina, Brasil y Bolivia (Hemiptera, Coriscidae). Revista de la Sociedad Entomologica Argentina 16: 49-66.
- Poppius, B., und E. Bergroth.** 1920-1921. Beitrage zur kenntnis der myrmecoiden Heteropteren. Annales Musei Nationalis Hungarici 18:31-88.
- Schaefer, C. W.** 1996. A new species of *Cydamus*, with a key to the species of the genus (Hemiptera: Alydidae). Annals of the Entomological Society of America 89(1):37-40.
- Schaefer, C. W.** 2004. Key to the genera of New World Alydidae (Hemiptera: Heteroptera). Proceedings of the Entomological Society of Washington 106(2):280-287.
- Stål, C.** 1870. Enumeratio Hemipterorum I. Hemiptera. Kongliga Svenska Vetenskaps Akademiens Handlingar 9(1):1-232.

CORRIGENDUM

On a recently published paper [Freytag, *Entomological News* 114(4): 181-186], the binomen *Agallia pecki*, was misspelled as *A. peck* only once, in the Abstract (page 181). Everywhere else in the paper, the binomen was spelled *Agallia pecki* or *A. pecki*, as intended by the author. The spelling "A. peck" is an incorrect original spelling and we are herein correcting it (Article 32.5, International Code of Zoological Nomenclature, Fourth Edition, 1999, "with effect from 1 January 2000").